

64-bit Microsoft® Windows® on an HP Integrity Superdome README



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For the latest information and updates for Windows on an HP Integrity Superdome:

1. Go to <http://www.hp.com/support/itaniumservers>.
2. Click **HP Integrity Superdome**

NOTE: It is highly recommended that you update your firmware and drivers to the latest versions. You may determine the firmware version currently on the system, by typing **info fw** at the EFI shell.

Windows OS installation to a drive on an unintended controller

Issue: Windows OS installation is supported only with the intended boot controller installed. This is a known Windows OS limitation.

Workaround: Except for the intended boot controller, all other boot controllers should be removed before Windows OS installation. Make a note of where these devices were installed for reinstallation after OS installation.

Configure the Smart Array 6402 as a boot controller over headless connection

Issue 1: The Telnet and Hyperterminal applications on Windows NT4 and Windows 2000 do not correctly map the ASCII string for the function keys.

Workaround: Use PuTTY, a terminal emulator available on Smart Setup.

Issue 2: During Power On Self Test (POST) the Smart Array firmware will display a banner and a configuration menu with instructions to press the **Esc** key to continue or the **F8** key to enter the configuration utility. When running the system in a headless configuration from a remote terminal, the Smart Array banner does not show the configuration menu during the Power-On Self-Test (POST).

Workaround: Use PuTTY, a terminal emulator available on Smart Setup.

Smart Array 6402 Event log warning recorded after consistency check

Issue: This version of the Event Notification driver will report the following "Warning" message in the Windows System Event log after a consistency check is performed on a logical volume:

The description for Event ID (24607) in Source (CPQCISSE) could not be found. It contains the following insertion string(s):

Example string: \Device\CPQCISSE0, 11, Parity/consistency initialization complete, logical drive 0.

Workaround: This is a known issue that will be corrected in the next release of the driver. The actual message should be an informational message reporting the success of the consistency check.

Smart Array 6402 timeout in event log (Event ID 9)

Issue: Under extremely heavy I/O conditions the Smart Array driver (cpqcissm) may generate Event ID 9 errors in the system event log.

Workaround: There is no known fix at this time. This issue does not result in the loss of any data.

Hot Swap PCI

Issue: Support on hot swap PCI.

Workaround: The hot swap PCI function is not supported at this time. Please check the site at <http://www.hp.com/support/itaniumservers> for updated information.

For external connections, Smart Array 6402 controllers are only supported connected to StorageWorks 43xx/44xx enclosures

Issue: Smart Array 6402 controllers are not compatible with the DS2300 or DS21xx enclosures.

Workaround: For the HP Integrity Superdome, use Smart Array 6402 controllers connected to external StorageWorks 43xx/44xx enclosures only.

StorageWorks 43xx enclosures in a split bus configuration with a single power supply may report errors and fail the logical volumes when attached to certain Smart Array controllers.

Issue: StorageWorks 43xx Enclosures in a dual bus configuration with an Ultra3 Dual Bus I/O Module and a single power supply may report errors and fail the logical volumes when attached to certain Smart Array Controllers. Port A of the StorageWorks 43xx Enclosure may intermittently report that all drives installed in the lower bays (Port A, bays 1-7) have been hot-plug replaced even though the drives have not been replaced. As a result, the array controller may fail the logical volumes, causing the data to become inaccessible or the server may hang or blue screen if the operating system is running from those drives. When the server is rebooted, the drives appear to be working properly; however, some data may be inaccessible. A Power-On Self-Test (POST) error message is not displayed. The problem occurs regardless of the position of the power supply or fans in the enclosure. This affects any StorageWorks Enclosure Model 4314R, Model 4314T, or Model 4354R in a dual bus configuration with an Ultra3 Dual Bus I/O Module and a single power supply, attached to either Smart Array 6402 controller.

Workaround: Operate the StorageWorks Enclosure with a minimum of two power supplies.

The Smart Array 530x/640x controllers do not automatically rebuild the internal HDD array when a failed drive is replaced

Issue: The Smart Array 530x/640x controller does not automatically rebuild the internal HDD array when a failed drive is replaced. The HP Integrity Server backplane does not provide the manageability features necessary for the Smart Array adapters to recognize an HDD when it is hot inserted into the system. As a result the Smart Array does not automatically rebuild the array when a failed drive is replaced.

Workaround: HDD arrays can be manually detected and rebuilt utilizing the following steps:

1. Download and flash the latest Smart Array firmware available from www.hp.com/support/itaniumservers.

NOTE: Minimum firmware revision for the SA530x controller is 3.54. Minimum firmware revision for the SA640x controller is 1.92

2. Download and install the latest Array Configuration Utility (ACU-XE) from www.hp.com/support/itaniumservers. The minimum required revision for the ACU-XE is 6.42.1.0.
3. If and when an internal HDD array fails, replace the failed physical drive, open the ACU utility and select “Refresh” in the Controller State field. The failed array will then begin rebuilding. This is a required step and will not be performed automatically by ACU.

NOTE: HDD failures will be detected by the HP Integrity Agents as well as the Windows System Event Log.

Error logged to System Event Log when system boots with network cable disconnected

Issue: When the system boots with a network card which does not have a LAN cable connected to it, the HP Insight NIC Agent service will log an error into the System Event Log. This is because the service has not detected a network connection. It cannot differentiate between a disconnected cable and a bad cable. Additionally, as the error gets logged to the System Event Log, the system's attention LED on the front panel starts blinking.

Workaround: Verify the cable connection. If the cable is disconnected intentionally, ignore the error. The NIC cable should not be left unplugged.

Adobe Acrobat Reader 6.0 does not support Windows Server 2003, Datacenter Edition (64-bit)

Issue: If you download Adobe Acrobat Reader 6.0 from the Adobe website you will not see the Windows Server 2003, Datacenter Edition (64-bit) OS listed in the platforms available.

Workaround: Download the Adobe Acrobat Reader from Adobe's Text-only download page. This allows for a general Windows install of the reader. HP recommends the usage of version 5.5 or lower on an HP Integrity Superdome.

Required steps to ensure successful kernel memory dump creation

Windows offers the ability to automatically manage the page file, though in systems with large memory configurations this requires committing more disk space than desired. Kernel memory dumps provide enhanced capability to debug a system failure. Administrators must set the page file size to a minimum of 20 GB to ensure successful creation of a kernel memory dump in the event of system failure. The entire 20 GB page file for a kernel memory dump may reside on the Windows system volume only. Other page files may be configured on other volumes as well, but a minimum of 20 GB page file must reside on the system volume. To increase the page file size:

1. Open the System Properties, select the **Advanced** tab, and navigate to the **Performance Options** frame.
2. Select the **Advanced** tab. Navigate to the **Virtual memory** frame.
3. Click **Change**.
4. Under **Drive**, select the volume where the page file will be located.
5. Under **Paging file size for selected drive**, select either **System managed size** or **Custom size**. Selecting **System managed size** will result in Windows sizing to page file to the recommended size. If this is too large, select **Custom size** and set the size to 20 GB.
6. Click **OK** on the current and next properties pages.
7. Navigate to the **Startup and Recovery** frame and click **Settings**.
8. Navigate to the Write debugging information frame and click Kernel memory dump.

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9. Click **OK** on the current and next properties pages.

Additionally, Windows will clear the dump from the page file to a separate file on disk after the system has rebooted. It is important to ensure the final dump (memory.dmp) is written to a location where sufficient storage exists to accommodate it. This file can be written to any disk.

To view or change the location of the final dump file:

1. Right click My Computer then Properties
2. Select the Advanced tab, then Startup and Recovery Settings.
3. Inside Write debugging information, select the lower text box, Dump file.
4. Choose a location with 20 GB of free space (enough to accommodate a very large memory dump).

Finally, users should install Microsoft QFE 822998, available here:

www.microsoft.com - diskdump.sys QFE

Creating a dump on an unresponsive system

HP recommends to exercise caution when performing this action since it results in system failure requiring a soft reset. If a system is unresponsive, a kernel memory dump can be created using either of two methods:

1. Using the SAC 'crashdump' command. At the SAC prompt, type 'crashdump.' The SAC display will be updated to reflect a fatal system error - "0x000000E2 – Manually Initiated Crash," and will indicate that a dump of physical memory is being created. Under certain conditions, CEs may observe a different bugcode – "0x0000000A - IRQL_NOT_LESS_OR_EQUAL." This is a known issue and will still result in a valid crash dump being created.
2. Using the MP, enter the Command Menu – 'cm'. To initiate the dump, use the 'tc' command. The SAC display will be updated to reflect a fatal system error – "0x000000E2 – Manually Initiated Crash," and will indicate that a dump of physical memory is being created.

Do not use the 16 GB option when using the re-install media

The system partition must be created on a 32GB or larger disk drive. When using re-install media, administrators and CEs should use either the 32 GB or the 'max drive size' option when configuring the system volume. Using the 16 GB option will result in an inability to create a kernel memory dump in the event of a system failure unless the page file size is manually configured afterward. Additionally, manual configuration of the page file size when using the 16 GB option will still result in a page file size of less than 20 GB, which is the minimum recommended size.

System Restore Media and Page Files

Issue: Using the 16GB option will result in an inability to create a kernel memory dump in the event of system failure unless the page file size is manually configured afterward.

Workaround: The system partition must be created on a 32GB or larger disk drive. When using the reinstall media, administrators and CE's should use either 32 GB or 'max drive size' options when configuring the system volume. Additionally, manual configuration of the page file size, when using the 16GB option, will still result in a page file size of less than 20 GB, which is the minimum recommended size.

Smart Array 6400 Controller prompts the use of the ADU to determine correct HDD ID

Issue: When a hard drive is moved to another ID position on the same array controller during an EFI post the system reports that the drive position has been changed and prompts the user to run the Array Diagnostics Utility (ADU) if previous positions are unknown.

Workaround: The Array Diagnostics Utility for IA64 servers will be offered at a later date. For an update on the Smart Array utilities, refer to HP website www.hp.com/support/itaniumservers. For additional information about moving drives and arrays, refer to the *Smart Array 6400 Controller User Guide*.

Remote access port to launch ACU

Issue: The information in the ACU Readme indicates that the port for remote access is 2831. If this port is used the ACU will not launch. The instructions provided are unclear and if the customer selects a browser configuration that will prevent the ACU from launching.

Workaround: The correct port for remote access is 2301, <http://<servername>:2301>. Follow the steps if you are running 64-bit on Windows.

If you are launching the ACU locally:

1. Click Start->Programs->Hp Array Configuration Utility->HP Array Configuration Utility. The ACU should launch.

If you are launching the ACU remotely:

1. Launch the ACU by clicking **Start->Programs->Hp Array Configuration Utility->HP Array**. This launches the ACU when port 2301 is used.
2. Open the 32-bit version of the browser. (When connecting to the server remotely you must use the 32-bit version of the browser, with the 32-bit JVM).
3. Start IE, connect to <http://<servername>:2301> where <servername> is either the name of the server or the ip address of the server. The **Systems Management** Homepage will be displayed.
4. Log in as an administrator. Click **Anonymous**, and when the login screen comes up, login as administrator. The default password is **administrator**.
5. Click on the **HP Array Configuration Utility** button, and ACU should launch.

SMS Reflection Utility

Issue: Using the SMS Reflection Utility while configuring cards on an HP Integrity server.

Workaround: It is not recommended to use the SMS Reflection Utility while configuring cards on an HP Integrity server at the EFI, such as the Smart Array card.

Security QFEs

Issue: Security updates.

Workaround: If you ordered your HP Integrity Superdome preloaded from HP, the following security QFEs are already included in the HP Windows Server 2003, Datacenter Edition (64-bit) image preloaded on your system

MS03-039 - Buffer Overrun In RPCSS Service Could Allow Code Execution (824146)

MS03-030 - Unchecked Buffer in DirectX Could Enable System Compromise (819696)

MS03-023 - Buffer Overrun In HTML Converter Could Allow Code Execution (823559)

Other QFEs

821047 - HP Integrity Superdome performance enhancements

817688 - ntbackup.exe update

Security Bulletins

The following security bulletins were recently released by Microsoft and tested by HP, but are not included in the HP Windows Server 2003, Datacenter Edition (64-bit) image preloaded on your system. Please download these security QFEs. They can be downloaded from http://www.microsoft.com/security/security_bulletins/

Microsoft Security Bulletin MS03-048 -Cumulative Security Update for Internet Explorer (824145)

Microsoft Security Bulletin MS03-045 - Buffer Overrun in the ListBox and in the ComboBox Control Could Allow Code Execution (824141)

Microsoft Security Bulletin MS03-044 -Buffer Overrun in Windows Help and Support Center Could Lead to System Compromise (825119)

Microsoft Security Bulletin MS03-043- Buffer Overrun in Messenger Service Could Allow Code Execution (828035)

Microsoft Security Bulletin MS03-041 - Vulnerability in Authenticode Verification Could Allow Remote Code Execution (823182)

Supplemental EFI information

EFI supplemental information:

Intel EFI information is available on <http://www.intel.com/technology/efi/>